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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/899,911	07/09/2001	Toshihiko Aoki	109965	4494

25944 7590 10/23/2003
OLIFF & BERRIDGE, PLC
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EXAMINER

SOHN, SEUNG C

ART UNIT PAPER NUMBER

2878

DATE MAILED: 10/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/899,911

Applicant(s)

AOKI, TOSHIHIKO

Examiner

Seung C. Sohn

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2003 & 23 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-27 is/are pending in the application.
- 4a) Of the above claim(s) 14-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. **Claims 14-27** are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 12 dated on July 23, 2003.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 6-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Sprague et al. (Patent No. US 4,409,479).**

Referring to claim 6, Sprague et al. shows in Fig. 2 the following elements of Applicant's claim:

a) a scale (18, i.e., grid pattern) having scale markings (19, 20, i.e., grid lines and spaces) formed along a measurement axis (x or y axis) (Col. 3, lines 65-68);

b) a sensor head (10) movably arranged relative to said scale (18) along said measurement axis for reading said scale markings (Col. 3, lines 60-64); and

c) a state detection system (12 to 17) mounted on said sensor head (10) for optically detecting a relative positional state of said sensor head to said scale (18), wherein said state detection system contains a light spot position sensor (14 to 17) including a substrate; and a plurality of photosensitive devices (14, 16, i.e., transducers) arrayed at a certain pitch, formed with semiconductor layers deposited on said substrate, and isolated from each other (Col. 4, lines 3-7).

Referring to claim 7, Sprague et al. shows in Fig. 1 that said plurality of photosensitive devices configures a photosensitive device array arranged one-dimensionally (Col. 4, lines 8-16).

Referring to claim 8, Sprague et al. shows in Fig. 2 that said plurality of photosensitive devices includes a first photosensitive device array (14) arranged on said substrate along a first axis (y axis); and a second photosensitive device array (16) arranged on said first photosensitive device array with an interlayer insulator therebetween, along a second axis (x axis) different from said first axis (Col. 4, lines 33-43).

Referring to claim 9, Sprague et al. shows in Fig. 3 a scanning detector (22) for sequentially scanning output signals from said plurality of photosensitive devices to detect a light spot position (Col. 4, lines 52-63).

Referring to claim 10, Sprague et al. shows in Figs. 4 & 6 that an output signal line commonly connected to terminal electrodes of said plurality of photosensitive devices; and a detection circuit connected to said output signal line, wherein a light spot is radiated as a light pulse to determine a light spot position from a delay time of a

detection output from said detection circuit after said light pulse irradiation (Col. 5, lines 8-22 and Col. 6, lines 16-27).

Referring to claim 11, Sprague et al. shows in Fig. 2 that said state detection system further includes a light source (12) arranged on said sensor head (10) for providing a light beam entering said light spot position sensor via said scale (18) (Col. 3, lines 59-64).

Referring to claim 12, Sprague et al. shows in Fig. 3 that said state detection system further includes a state detection means for detecting an original position of said sensor head to said scale based on a light spot position detected at said light spot position sensor (Col. 4, lines 52-63).

Referring to claim 13, Sprague et al. discloses that said light spot position sensor detects rotations in a parallel plane between said sensor head and said scale based on detection of interference fringes (Col. 7, lines 10-20).

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seung C. Sohn whose telephone number is (703) 308-4093. The examiner can normally be reached on Monday through Friday from 8:30 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on (703) 308-4852. The fax phone numbers for


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the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

SCS
SCS
October 20, 2003


DAVID PORTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800